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Sardar Patel University
B.Sc. (Semester-III) Examination
2013

5th December, 2013

Course Code: US03FSTA01

Foundation of Statistics - I
(Foundation Course)

Time: 2 - 30 to 4 - 30 p.m.

Note: (i) Simple/Scientific calculator is allowed.

M.Marks: 70

(ii) Graph paper will be provided on request.

Q.1 Multiple Choice Questions

(10×1)

- (1) Simple random sampling is used when population is
(a) homogeneous (b) heterogeneous (c) Both (a) and (b) (d) Neither (a) nor (b)
- (2) If $N = 15$ and $n = 5$ the possible systematic samples are -----
(a) 2 (b) 3 (c) 4 (d) None of these
- (3) Which of the following is not a part of statistical table?
(a) Caption (b) Title (c) Foot note (d) Legend
- (4) ----- must be given at the bottom of the table, if secondary data is used.
(a) Head note (b) Foot note (c) Source note (d) Title
- (5) ----- are the first hand information collected, compiled and published by organization for some purpose.
(a) Primary data (b) Secondary data (c) Qualitative data (d) Quantitative data
- (6) In a grouped frequency distribution, the classes should be what?
(a) Mutually exclusive (b) Exhaustive (c) Both (a) and (b) (d) Neither (a) nor (b)
- (7) Which method do you considered to be best method of collecting primary data if informants/respondents are literate and spread over a vast area?
(a) Direct Personal Inquiry Method (b) Mailed Questionnaire Method
(c) Indirect Oral Investigation Method (d) All of the above
- (8) Which of the following is not a method of drawing a random sample?
(a) Lottery method (b) Mailed Questionnaire Method
(c) Use of random numbers table (d) Both (a) and (c)
- (9) Which of the following can be described as variable?
(a) Pregnancy duration (b) Heart rate
(c) Time spent on computer(in hours) (d) All of the above
- (10) Which of the following is NOT a measure of central tendency?
(a) Median (b) Standard deviation (c) Mean (d) Mode

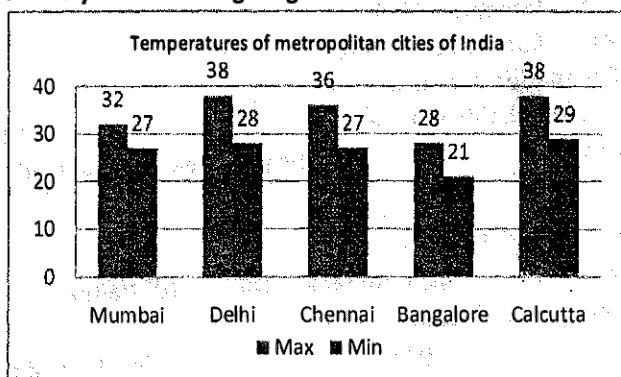
Q.2 Short Type Questions (Attempt Any Ten)

(10×2)

- (1) Give two examples each of variable and categorical variable (attribute).
- (2) What is diagram? State its advantages.
- (3) How will you draw a systematic sample of size $n = 4$ from a population of size $N = 20$?
- (4) What is tabulation? State its importance.
- (5) State the aim of sample survey.
- (6) Define Mean. Write down the formulae to calculate mean.
- (7) Give two examples each of nominal and ordinal data.
- (8) List out the various methods of drawing a sample. According to you, which method do you consider to be most suitable if population is homogeneous?

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- (9) State any two applications of Statistics.
- (10) What is secondary data? Give any two sources of secondary data.
- (11) Identify the following diagram. Name it and state its objective(s).



- (12) Which diagram do you considered to be most suitable for the data given below? Name it and state its objective(s).

Year	Profits ('000 Rs.)	
	Company A	Company B
2010 - 11	120	90
2011 - 12	135	95
2012 - 13	140	108

- Q.3(a) State the various methods of collecting primary data. According to you if informants are literate and spread over a vast area, which methods do you considered to be best? Write in brief about them. (5)

- (b) List out the various methods of drawing a sample. Write in brief about any one of them. (5)

OR

- Q.3(a) Explain lottery method by giving an example. (5)

- (b) State the applications of statistics in various fields. Write in brief about any one of them. (5)

- Q.4(a) State the various methods of drawing a sample. Write in brief about any one of them. (5)

- (b) State the various sources of secondary data. (5)

OR

- Q.4(a) Write a note on mailed questionnaire method. (5)

- (b) Present the following information through a multiple bar diagram. State its objective(s). (5)

LCD MARKET SHARE (%)

Market share	Brand		
	Samsung	Sony	LG
World	18.6	13.2	8.4
India	40.8	20.5	21.2

- Q.5(a) What is classification? State the purpose of classification. (5)

- (b) Recorded here are the blood types of 40 persons who have volunteered to donate blood at a blood center. Summarize the data in a frequency table. (5)

BLOOD GROUP							
AB ⁻	O ⁺	B ⁺	A ⁻	A ⁻	A ⁻	B ⁺	O ⁺
O ⁺	AB ⁻	A ⁺	O ⁺	A ⁺	O ⁻	A ⁺	B ⁻
AB ⁺	B ⁻	O ⁺	A ⁻	B ⁺	A ⁺	B ⁺	AB ⁺
O ⁺	A ⁻	AB ⁺	O ⁻	B ⁻	B ⁺	A ⁺	B ⁺
A ⁺	A ⁻	A ⁻	O ⁻	O ⁻	A ⁺	AB ⁻	A ⁺

OR

Q.5(a) What is tabulation? State the various parts of table. Describe in brief about any one of them. (5)

(b) Draw a blank table to show the no. of candidate sexwise, appearing in the first year, second year and third year examination of university in the faculty of Arts, Commerce and Science in a certain year. (5)

Q.6(a) What is an average? State its uses. (5)

(b) A sample of underweight babies was fed a special diet and the following weight gains (lbs) were observed at the end of three month. (5)

6.7 2.7 2.5 3.6 3.4 4.1 4.8 5.9 8.3

Calculate Mean and standard deviation.

OR

Q.6(a) List out the various measures of central tendency. Define any one of them. (5)

(b) Calculate mean, median and mode for the data given below: (5)

23 41 11 13 27 44 33 19 52 22

----- Best of Luck -----

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